



# The Energy Connection

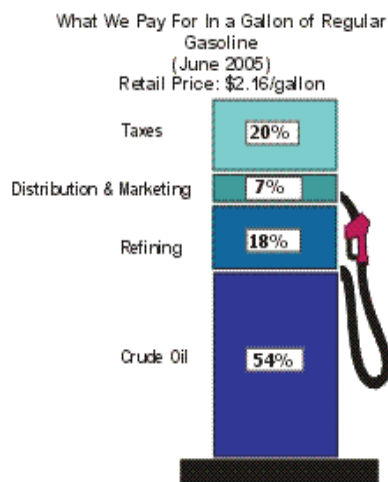
State Budget and Control Board

*Summer 2005*

## The High Cost of Gasoline – It's All Relative!

Americans today are paying high prices for gasoline compared to last year, but consider what consumers in other countries are paying and the situation doesn't seem so bad. On July 15, 2005, the average cost for regular gasoline was \$2.32 per gallon in the United States, but drivers in these countries were paying much more for an equivalent amount and grade:

Belgium	\$5.91
France	\$5.54
Germany	\$5.57
Italy	\$5.96
Netherlands	\$6.48
United Kingdom	\$5.79



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## EarthCraft House Has Taken Root in South Carolina

The South Carolina Energy Office's EarthCraft House program is rapidly gaining market recognition and consumer acceptance in our state. EarthCraft, first implemented by the Atlanta Home Builders Association, consists of voluntary standards creating energy efficient and environmentally sensitive houses.

As a result of SCEO relationships and actions with the Charleston Trident Home Builders Association, the Greenville Homebuilders Association, Upstate Forever and Southface Energy Institute, approximately 30 EarthCraft Houses are now under construction. The program provides specific guidelines, certified training, and clear incentives. The SCEO has been assisting in training in Charleston and Greenville, and in the costs for inspections.

In the Charleston area, Charleston Classic Homes has completed the first EarthCraft House in the Low Country. This home is in the Seaside Plantation neighborhood on James Island. Charleston Classic Homes has four additional EarthCraft Houses under construction in the Rushland neighborhood on Johns Island.

In Greenville, Upstate Forever held a ribbon-cutting ceremony for the construction of an EarthCraft House for its Chairman, Carlton Owens. This home is in one of Greenville's historic downtown home areas, and has generated great neighborhood excitement and enthusiasm. The builder for this home is ROME Construction Group.

Another EarthCraft House is completed and occupied in Greenville, built by another of Greenville's premiere custom homebuilders, Addison Custom Homes. Addison has three other homes under construction.

In recent Home Shows in both Charleston and Greenville, consumer response to the EarthCraft House information provided at the South Carolina Energy Office booth was excellent.

The alliances and efforts truly demonstrate the energy conservation and environmental benefits of working together to build a better tomorrow.

## We've Moved!

The SCEO has moved, but not too far. We've moved from the 10th floor to the 4<sup>th</sup> floor, Suite 430, of The Capital Center, formerly known as the SouthTrust Building. Our phone and fax numbers and e-mail addresses remain the same.

## Notes from the Director

*John F. Clark*



For many years, the South Carolina Energy Office has implemented activities to save energy dollars for our citizens. Our energy efficiency, technical and financial assistance programs over the last decade are saving over a hundred million dollars for South Carolinians.

Despite our successes, we must constantly adjust our efforts to meet new energy challenges. We have continued to increase our dependence on coal and oil at a time when prices for these commodities are dramatically increasing and the cumulative environmental impacts of burning fossil fuels is rising and causing problems for forests, crops, water quality and human health. Furthermore, diminishing world oil reserves and instability in Asia, the Middle East, Africa and South America, coupled with fast rising demand for oil in China and India, suggest that we, and others with far-sight, must reduce our dependence on oil.

So, what's new in South Carolina?

Last year, we brought truck stop electrification to our state. This enables 18-wheelers to cease idling their engines for their 10 to 11-hour rest stops. If we can help truck stop electrification to spread, the result could be tens of millions of gallons of petroleum products saved, and hundreds of thousands of tons of idling-related harmful emissions removed from South Carolina's air.

Another futuristic activity is alternative transportation fuels. In South Carolina, ethanol, biodiesel, propane and compressed natural gas displaced over a million gallons of gasoline and diesel fuel last year, and our state's use of these clean-burning, made-in-the-USA fuels is increasing almost exponentially.

Biomass is another growing solution. Energy from landfill gas and incineration of wood wastes is already displacing large amounts of fossil fuels, chiefly coal and natural gas, and the Energy Office is working with farm interests, municipalities, industries, utilities and other interested parties to determine more and better ways to utilize animal manure, sewage, agricultural residues, wood wastes and other organic sources to produce home-grown Palmetto State fuel for South Carolina.

Although South Carolina does not have the high-velocity sustained winds found out West, the wind does, in fact, blow in our state. We are currently modeling wind patterns across the state at a high level of detail to determine every possibility for implementation of small-scale wind applications. Waites Island, near Little River on our northeast coast, is one such possibility, and we are working with Coastal Carolina University and Savannah River National Laboratory to obtain federal funds for a 50-kilowatt turbine on that site. We are also working with partners to acquire anemometers to measure high-altitude wind currents on coastal sites and up to 20 miles off shore.

## What's Happening Around the State



The South Carolina Energy Office and the Association of South Carolina Energy Managers recently partnered to conduct a classroom-training program to prepare qualified energy managers to take the CEM examination. Nineteen energy managers took the exam, and should be notified by the end of August. The designation of CEM, or Certified Energy Manager, recognizes individuals who have demonstrated high levels of experience, competence, proficiency, and ethical fitness in the energy management profession. Once certified, CEM's are part of an elite group of 6,000 professionals serving industry, business and government throughout the US and in 22 countries abroad.

The SCEO and ASCEM -sponsored training program consisted of five days of classroom instruction and one day for the examination. The usual registration fee for this type of training exceeds \$1,000. To encourage participation, SCEO and ASCEM covered all course costs for participating ASCEM members. The only costs that the individual or the agency had to incur were the examination fee (\$200) and the book costs. Jim Herritage, Certified Energy Manager and approved trainer from the Association of Energy Engineers (AEE), conducted the training.

**The tenth report on demand-side activities implemented by suppliers of electricity and natural gas throughout South Carolina is available. This report summarizes energy conservation information submitted by retail distributors of electricity and natural gas in South Carolina, with a purpose of describing ways to use conservation to meet the needs of our state.**

**You can access the DSM report at [www.energy.sc.gov](http://www.energy.sc.gov).**

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## Continued from Page 2

Hydrogen is now the most popular “energy source of the future.” How hydrogen plays out in the long run remains to be seen, but various parties in the Palmetto State are working hard to make sure that our state is a player. The Savannah River National Laboratory is a leader in basic hydrogen research, and its neighboring National Center for Hydrogen Research, near Aiken, will soon be looking at commercial applications. Clemson University and the University of South Carolina have major fuel cell research efforts underway, along with industrial partners such as BMW and GE Power Systems. The South Carolina Energy Office, in addition to its fuel cell demonstration collaboration with USC’s Green Dorm, is working with a number of planning and promotional efforts to maximize our state’s position, including those of Fuel Cell South, the South Carolina Hydrogen Coalition and Next Energy.

Another potential growth area is a new generation of smaller, standardized, more economic nuclear power plants. South Carolina, because of favorable characteristics related to the Savannah River Site and historic public attitudes, is in the hunt to be the location for the next nuclear facility.

Finally, the South Carolina Energy Office has now operationalized its new South Carolina energy forecasting model, and we hope to be able to use the model to develop goals for our energy future that maximize economic and environmental benefits for our state.

In the old world of fossil fuels, South Carolina was only a consumer and never a player. In the new world of fossil alternatives, perhaps we can be a leader.

## Clemson and SCEO Win \$875,000 Federal Research Grant

The U.S. Department of Energy’s State Technologies Advancement Collaborative (STAC) recently announced the results of its Energy Efficiency and Fossil Energy Science Solicitation, which includes a project that Clemson University is partnering with the South Carolina Energy Office to conduct.

Clemson University, the lead applicant, will receive over \$875,000 in funding from the STAC program for the project entitled: *Iron-based Mixed Metal Carbide Fischer-Tropsch Catalysis*. This three-year project will assess the performance of iron-based bimetallic catalysts formed in the carbide state at reaction temperatures and conditions, rather than in their metallic state. The iron-based catalysts are crucial to Fischer-Tropsch synthesis of clean fuels, additives, and lubricants derived from gasification of both coal and biomass resources.

The particular objective of the Science solicitation is to pursue “bridge” research and development (R&D) of interest to STAC and both the U.S. Department of Energy’s Office of Energy Efficiency and Renewable Energy (EERE) and Office of Fossil Energy (FE), with ultimate applications that will promote energy efficiency and clean use of fossil energy.

Partnering with Clemson University in this project are South Carolina Energy Office, the Louisiana Energy Office, Louisiana State University, RTI, Rentech, and Sud-Chemie, Inc.

The total estimated project cost is \$1.3 million, with participants putting in about a \$425,000 cost share.

## EPA Honors BMW as a Green Power Purchaser

The United States Environmental Protection Agency (EPA) has recognized BMW Manufacturing near Spartanburg, SC, for switching to green power. Green power is a marketing term for electricity products that are partially or entirely generated from environmentally preferable renewable energy sources such as solar, wind, geothermal, biogas, and low-impact biomass and hydro resources.

At the ceremony, EPA Green Power Partner BMW, Spartanburg, was a recipient of the “Green Star” Award for serving as a role model for other green power purchasers in the Southeast. At the BMW plant, 25 percent of the plant’s power comes from captured methane gas drawn from the Palmetto Landfill. BMW’s Spartanburg facility is currently listed as number 18 on EPA’s Top 25 Green Power Purchasers list that identifies the nation’s largest purchasers. Additional details about other green power purchasers can be found on the EPA Web site at [www.epa.gov/greenpower/partners/gpp\\_partners.htm](http://www.epa.gov/greenpower/partners/gpp_partners.htm).

The EPA’s Green Power Partnership is a voluntary program to encourage the use of renewable energy as a way to reduce the risk of climate change. The Green Power Partnership works to reduce the environmental effects of conventional electricity generation by supporting and recognizing organizations that pledge to switch to green power for a specified minimum percentage of their electricity needs. Nationwide, there are currently more than 550 Green Power Partners. The total annual green power commitment by these Partners is 2.5 billion kWh, which is enough electricity to power 230,000 homes.

For more information about green power, visit [www.epa.gov/greenpower](http://www.epa.gov/greenpower).



## South Carolina's Thirst for Energy Keeps on Rising

South Carolina's population is growing fast, but our thirst for energy resources is growing even faster. That is one of the preliminary findings of the South Carolina Energy Outlook Project, which the Energy Office will be using for a variety of analyses over the months and years to come.

Last fall, the Energy Office contracted with Global Insight, an economic and financial forecasting company, to develop a South Carolina-specific energy forecast dataset, software and model. These tools will enable us to project energy use and energy expenditure forecasts under a variety of scenarios, and make recommendations to help the state chart an energy future that maximizes South Carolina's economic, environmental and reliability needs.

Additionally, the South Carolina Energy Office needs baseline data and forecasts upon which it can base and implement its program areas, including energy conservation and efficiency, renewable energy, and emergency response.

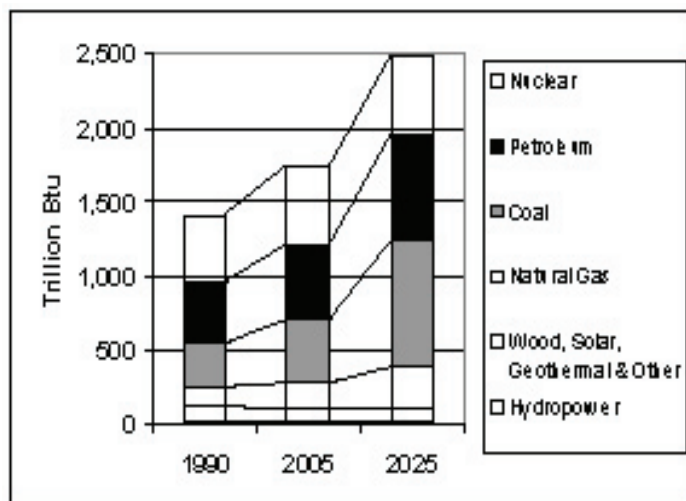
The dataset includes substantial historical information pertaining to energy use by category of end user (residential, commercial, industrial, transportation), and by fuel type. It includes heating and cooling degree days, in order to account for variations caused by weather.

The model allows staff to assess future demand and supply under a variety of demographic, economic, fuel availability and price scenarios. We will also be able to project the various impacts of differing energy efficiency scenarios, as well as the economic and environmental effects of consumption patterns of alternative energy resources, such as biomass, solar, ethanol, biodiesel, and compressed natural gas.

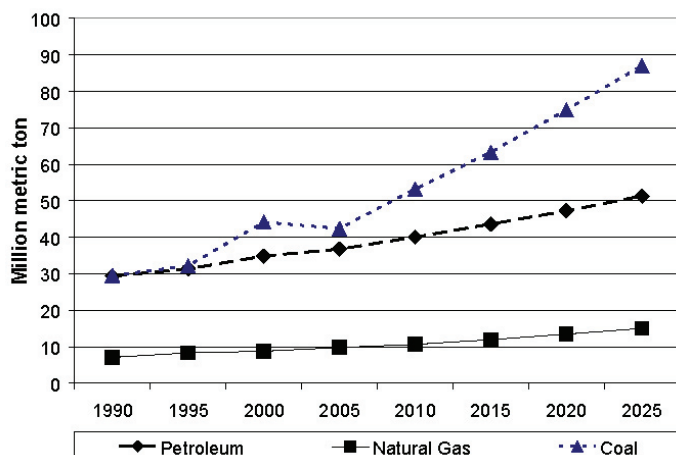
Baseline data already examined suggests that unless a change in course is achieved, South Carolina's air quality will continue to worsen and South Carolina citizens will pay progressively higher portions of their income for energy.

We intend for the South Carolina Energy Outlook Project to provide state policy makers with a clearer view of where the state is headed in regard to its current energy use patterns, and also to suggest alternative pathways that are more economically and environmentally attractive.

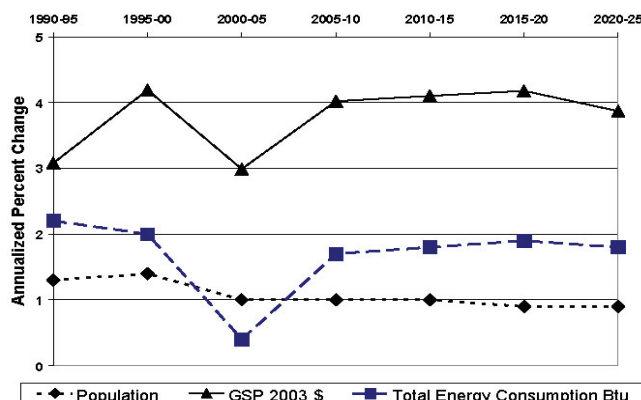
**SC Energy Consumption, 1990-2025**



**SC CO<sub>2</sub> Emissions, 1990-2025**



**SC Growth Rate: Population, Economy, and Energy Use, 1990 - 2025**







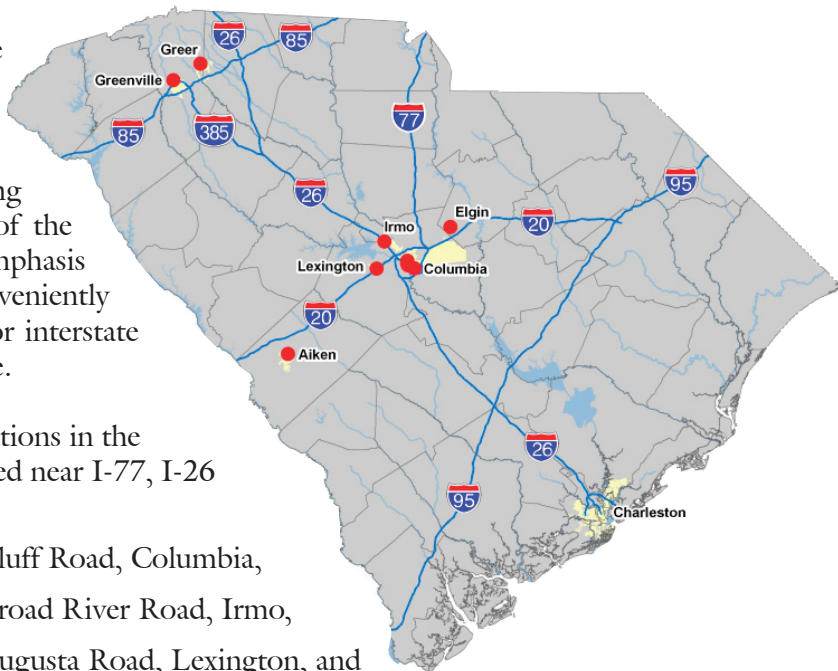
## Refueling Infrastructure for Ethanol (E85) Grows in South Carolina

This spring, six fueling stations in the Columbia and Greenville areas kicked off their sale of ethanol (E85) with an “E85 for 85 Cents” day. E85 is the term for motor fuel blends of 85 percent ethanol and 15 percent gasoline and is an alternative fuel as defined by the U.S. Department of Energy. Besides its superior performance characteristics (octane=105), ethanol burns cleaner than gasoline, and it is a completely renewable, domestic, environmentally-friendly fuel that enhances the nation’s economy and energy independence.



Through environmental fines assessed by the Environmental Protection Agency, the Palmetto State Clean Fuels Coalition (PSCFC) assisted Pitt Stop Convenience Stores in Columbia and Spinx Corporation in Greenville with installing the E85 refueling infrastructure. The goal of the PSCFC is to develop E85 fueling stations with emphasis on development of infrastructure that is conveniently accessible to large fleets and located along major interstate corridors connecting urbanized areas of the state.

The four publicly accessible E85 refueling stations in the Columbia area, owned by Bob Brandi, are located near I-77, I-26 and I-20, as follows:

-  Pitt Stop #35 located at 2020 Bluff Road, Columbia,
-  Pitt Stop #13 located at 7409 Broad River Road, Irmo,
-  Pitt Stop #16 located at 5019 Augusta Road, Lexington, and
-  Pitt Stop #28 located at 595 Spears Creek Church Road, Elgin.

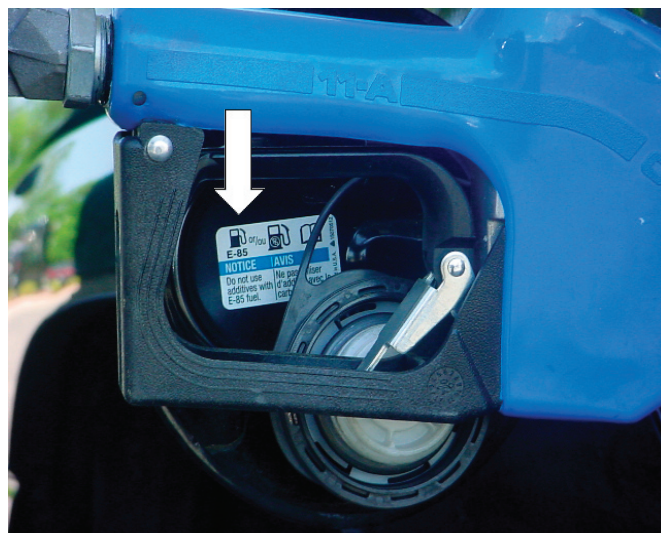


The Greenville area E85 refueling stations, owned by Stuart Spinx, are both located off Interstate 85:

-  Spinx Store #121 located at 2497 South Highway 14, Greer, and
-  Spinx Store #138 located at 1519 White Horse Road, Greenville.

In addition, another E85 station funded by the EPA program is the Gervais Street Exxon located at 1421 Gervais Street, Columbia. This station opened in October 2004. So far, the Gervais Street Exxon has sold 28,000 gallons of E85, and station owner Mike McMeniman attributes the increase in his current sales of E85 to the fact that prices for gasoline have risen \$.20-\$.35 above the cost of ethanol. Other publicly accessible E-85 sites include the Corner Pantry located at 1425 Bluff Road, Columbia, and United Energy Distributors located at 1046 Toolebeck Road, Aiken.

Vehicles that can use ethanol or E-85 are called Flexible Fuel Vehicles (FFVs). These vehicles can use both ethanol and gasoline. DaimlerChrysler, Ford, GMC, Mazda, Mercury and Isuzu all produce or have produced FFVs. Check inside the fuel door or consult your owner’s manual to see if your vehicle can use ethanol. For a complete listing of FFVs, go to [www.e85fuel.com](http://www.e85fuel.com).



*Check inside the fuel door or consult your owner’s manual to see if your vehicle can use ethanol.*

## South Carolinians Energy Use Continues to Grow

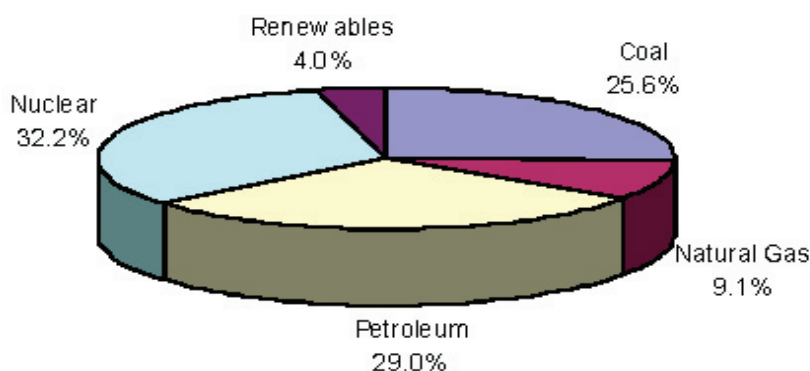
According to the latest edition of the *South Carolina Energy Statistical Profile*, South Carolinians spend \$9.9 billion on energy (ranked 26<sup>th</sup> in nation), which is equivalent to \$2,430 per person (28<sup>th</sup> in the nation). With South Carolina's low per capita personal income of \$24,840, this presents a substantial economic impact on the South Carolina populace. The *2005 South Carolina Energy Statistical Profile* is a detailed and comprehensive source of the latest available information on energy consumption, prices, expenditures, sources of supply, and the role of renewable energy technology in South Carolina. The *Profile* serves as a useful interpretative tool for state policy makers, educational institutions, businesses and the general public.

The *Profile* provides comparisons among different fuel types and economic sectors, and illustrates how South Carolina fares in relation to the rest of the United States. The report is divided into seven sections: Total Energy Data, Electricity, Petroleum, Natural Gas, Coal, Nuclear and Renewable Energy. Highlights in the *Profile* show that the transportation sector accounted for 38.5 percent of energy expenditures. South Carolina ranks 16<sup>th</sup> in coal expenditures; 18<sup>th</sup> in total energy consumption per capita, using more energy per person than 31 other states, plus the District of Columbia; 20<sup>th</sup> in electricity expenditures; 27<sup>th</sup> in petroleum expenditures; and 34<sup>th</sup> in natural gas expenditures.

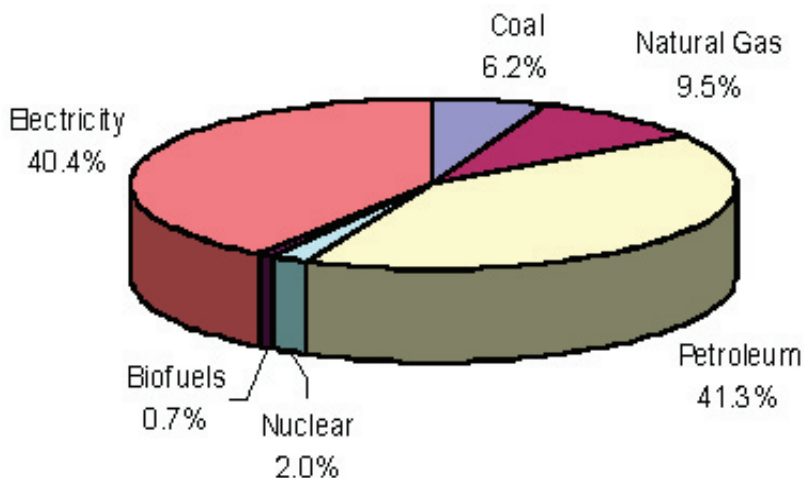
In the residential sector, South Carolina ranks 14<sup>th</sup> in industrial sector consumption per capita, 18<sup>th</sup> in energy consumption per capita, 26<sup>th</sup> in transportation sector consumption per capita, and 40<sup>th</sup> in commercial sector consumption per capita. When broken down by fuel source, South Carolina ranks 1<sup>st</sup> in the nation in nuclear energy consumption per capita; 3<sup>rd</sup> in electricity consumption per capita; 18<sup>th</sup> in coal consumption per capita; 39<sup>th</sup> in petroleum consumption per capita; and 44<sup>th</sup> in the nation in natural gas consumption per capita.

The *2005 South Carolina Energy Statistical Profile* is available at [www.energy.sc.gov](http://www.energy.sc.gov) under Public Information, SCEO Publications, and is available in hard copy at all South Carolina community libraries, college libraries, and public school libraries. For more information, please contact the South Carolina Energy Office at (803) 737-3080 or [energy@gs.sc.gov](mailto:energy@gs.sc.gov).

**South Carolina Energy Consumption  
by Fuel Source**



**South Carolina End-Use Energy Expenditure  
Estimates by Fuel Source**





## Solar Road Show

The South Carolina Energy Office and York Technical College have developed the Solar Road Show. It is available for demonstration to any group interested in learning more about solar energy and its possibilities at work or at home. The Solar Road Show includes a working solar model and a tabletop display, along with associated handouts. The model can be displayed indoors, but is ideally suited for outdoor full-sun exposure.



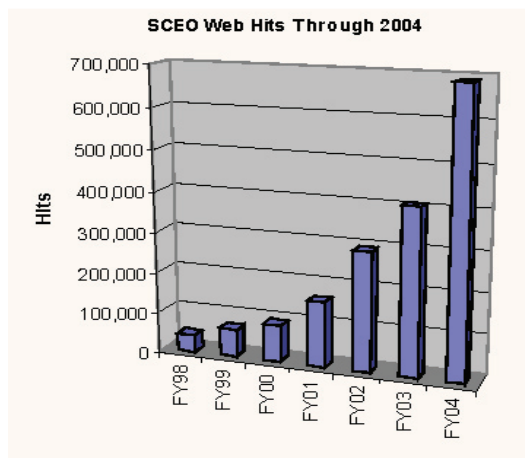
The Solar Road Show will be made available throughout the year, and will be featured at:

- ✿ Million Solar Roofs Initiative (MSRI) meetings;
- ✿ South Carolina Solar Council meetings;
- ✿ Environmental group meetings;
- ✿ Earth Day celebrations;
- ✿ Workshops for teachers;
- ✿ SCEO-sponsored meetings; and
- ✿ Association of South Carolina Energy Managers conferences.

For more information on the Solar Road Show, or to schedule it for your event, contact the SCEO at 1-800-851-8899 or at [www.energy.sc.gov](http://www.energy.sc.gov).

## SCEO Website is a Hit

The South Carolina Energy Office's website continues to serve as a successful vehicle for sharing the progress of the SCEO's mission and work. Updated frequently, the website contains important information regarding funding opportunities, advancements and achievements in energy saving technologies and helpful public information for citizens concerned with energy conservation. In fiscal year 2004-05, the website posted nearly 700,000 hits.



There are several marquee items found at the SCEO website. For instance, parties interested in developing projects to promote and further "green" energy programs and energy conservation can find a wide array of funding opportunities. The site's calendar of training and professional development opportunities highlights local and regional events that further education and exposure to energy conservation measures. The website also gives access to educational tools, such as the sections dedicated to renewables and green power, as well as the wide array of free publications offered. Some of the more popular sub-pages include the Radioactive Waste page, Residential Sector page, and the Solar page.

The popularity of the website continues to climb. Visitors continue to come from all 50 states and every world continent. To access all of the important information found at our website, simply visit [www.energy.sc.gov](http://www.energy.sc.gov).

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## Biomass Use to Flourish

The Columbia-based Corporation for Economic Opportunity has been awarded \$250,000 by the U.S. Forestry Service to provide incentives for use of National Forest woody biomass as fuel for electricity production by Santee Cooper in Berkeley County and for stream and electricity cogeneration at the University of South Carolina. Other partners include Johnson Controls, the SC Forestry Association and the South Carolina Energy Office. For more information, contact Joe James of the Corporation for Economic Opportunity at [JosephJJames@bellsouth.net](mailto:JosephJJames@bellsouth.net).

## E2L Conference Offers More

The Energy 2 Learn (E2L) conference on June 22 was bigger and better than ever! New to the agenda was a half-day event on June 21 that had 50 South Carolina teachers enjoying a first-of-its-kind tour that made others “green” with envy.

The half-day Energy in Action Tour was open to the first 50 teachers who registered and paid a \$40 fee. The tour began at USC’s West Quad dormitory, (the “green” dorm) where our Fabulous 50 registered. From there, participants began a tour of the West Quad, getting a tour and presentation about this LEED (Leadership in Energy Efficiency Design)-certified facility. Participants then boarded a bus to experience local environmental businesses:

- The Palmetto Landfill – this tour demonstrated what goes on at the landfill, the leachate collection area, and participants learned about Palmetto’s upcoming landfill gas-to-energy project;
- City of Columbia Composting Facility – this stop showed how much yard waste the capital city generates and processes, and how it is being used; and
- Paper Stock Dealers – this stop at the award winning environmental education center showed how recycling saves energy, conserves natural resources, reduces pollution and minimizes materials ending up in landfills.

At the conclusion of the bus tour, participants returned to the West Quad to see firsthand how a solar home works via a six-foot by six-foot model. Our teachers then used foot power to walk to dinner at Moe’s Southwest Grill. After dessert at the West Quad, the teachers retired to their suites for an overnighter.

The eighth-annual Energy 2 Learn conference for teachers was on Tuesday, June 22. This free event is open to all K-12 South Carolina teachers interested in energy and environmental issues. Topics this year included:

- Recycling – It’s an Energy Issue
- Water – We All Live Downstream
- Air – Energy’s Effect on Air in South Carolina
- Energy – Energy to Produce Food
- E2L – The Classroom Presentation and Energy Patrol
- USC’s Green Dorm and Fuel Cell Technology

Great information, promotional items and educational

materials were given away at each session.

Teachers enjoyed a twist on the Treasure Hunt this year. We invited several local environmentally-conscious merchants and artists to display and sell their wares. These one-day sales totaled nearly \$1,600.

Energy 2 Learn is sponsored by the SC Energy Office, the Department of Health and Environmental Control Office of Solid Waste Reduction and Recycling, and the US Postal Service, Columbia Cluster. Generous sponsors to this year’s program were the Electric Cooperatives of South Carolina and Johnson Controls.



*Jean Prewitt leads a class in “Energy to Produce Food” at the eighth annual Energy 2 Learn conference for teachers.*

### ASCEM Announces Scholarship Recipients

The Association of South Carolina Energy Managers is proud to announce the winners of the 2005 Mark A. Martin ASCEM Scholarship. The winners are Rachel Berry who will be attending Clemson University and Jana Cooper who will be attending the University of Southern California, Graduate School of Architecture. Both recipients were awarded a \$1,000 scholarship. Rachel Berry is the daughter of James Robert Berry of the SC Department of Mental Health, and Jana Cooper is the daughter of Joan Cooper of the SC Department of Disabilities and Special Needs. A qualifying student for the scholarship must be a graduating senior from a South Carolina school and must plan to attend some form of education after graduation, including but not limited to a college, university, or technical college. Primary consideration is given to the student’s academic effort, leadership ability, and extracurricular activities, without considering financial need.

The scholarship is available to ASCEM members and supporting staff, their spouses, children and grandchildren.



## South Carolina Students Shine in Energy Competitions

The South Carolina Energy Office recently recognized students at the 49th annual USC Central South Carolina Region II Science and Engineering Fair, held in Columbia, and at the South Carolina Junior Academy of Science awards, held in Charleston.

SC Energy Office Award winners of USC's Region II Science and Engineering Fair each received a savings bond and a plaque or certificate as prizes.

### Junior Division (Grades 5-8)

1<sup>st</sup> Place, \$100 Savings Bond

Eliza Smith

Brennan Elementary School

2<sup>nd</sup> Place, \$75 Savings Bond

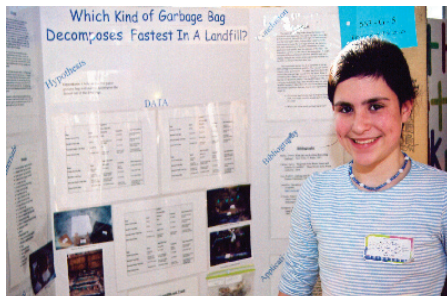
Matthew Harding

E.L. Wright Middle School

3<sup>rd</sup> Place, \$50 Savings Bond

Woody Horn

Hand Middle School



Eliza Smith



Woody Horn

### Senior Division (Grades 9-12)

1<sup>st</sup> Place, \$100 Savings Bond

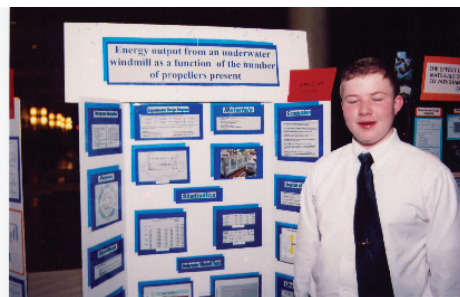
Theodore Cole

Spring Valley High School

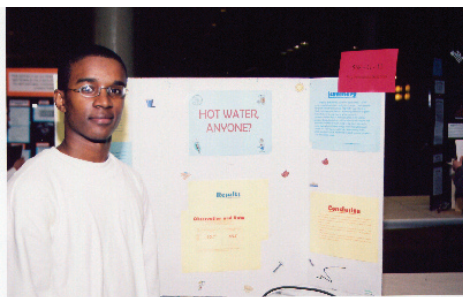
2<sup>nd</sup> Place, \$75 Savings Bond

Lauren Wright

Richland Northeast High School



Theodore Cole



Donald Wilson

3<sup>rd</sup> Place, \$50 Savings Bond

Donald Wilson

Crestwood High School

USC's Region II Science and Engineering Fair encompasses students in grades 5 - 12 from public and private schools in nine counties: Calhoun, Clarendon, Fairfield, Kershaw, Lexington, Richland, Newberry, Orangeburg, and Sumter. For more information, contact Dr. Don Jordan at [jordan@gwm.sc.edu](mailto:jordan@gwm.sc.edu).

The South Carolina Junior Academy of Science (SCJAS) is the only state-wide organization of high school students designed to stimulate and promote interest among its members through the development of independent research in science and mathematics. These investigations are of a problem solving nature and their design serves as a means for students to do exciting things in science and mathematics beyond regular classroom activities.

SCJAS winners whose projects involved study on energy included:

Eric Buchanan

Governor's School for Science and Math

Chuan Zhang

Governor's School for Science and Math

Michael Fountain

Governor's School for Science and Math

Geraldine Rothschild

Academic Magnet High School



Eric Buchanan



Chuan Zhang

Michael  
Fountain

Geraldine  
Rothschild



SCJAS energy project winners were awarded \$100 cash.

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For information on the South Carolina Junior Academy of Science or how your organization can become a member or sponsor of the SCJAS, contact Dr. Karen Fox, Director of SCJAS at [kfox@gw.med.sc.edu](mailto:kfox@gw.med.sc.edu).

Three Igniting Creative Energy (ICE) Challenge student entries from South Carolina were selected for inclusion in the 2005 "Excellence in Creativity" notebook. The Challenge is a national k-12 educational competition that students enter by submitting projects illustrating how their wise energy choices and environmental stewardship help reduce energy consumption and improve their communities. Outstanding entries from across the country are chosen for inclusion in the notebook along with the three national student winners.

The Challenge is sponsored and funded through an educational grant by Johnson Controls, Inc. with additional support from the United States Energy Association and administered by the National Energy Foundation.

The South Carolina winners included in the ICE Challenge notebook are:

FeiFei Deng	Windsor Elementary, Columbia
Jasmin Graham	Windsor Elementary, Columbia
Jennifer Silvestrini	Chapin Elementary, Chapin

For more information on the ICE Challenge, contact Terry Adkins of Johnson Controls at [terry.s.adkins@jci.com](mailto:terry.s.adkins@jci.com).

## Progress is Blowing in the Wind

The SCEO, in partnership with Santee Cooper and AWS Truewind, has completed a comprehensive data compilation of Wind Energy Potential throughout South Carolina. The detailed wind resource data and analyses are available at [www.awstruewind.com/inner/windmaps/UnitedStates.htm](http://www.awstruewind.com/inner/windmaps/UnitedStates.htm), SCEO's webpage at [www.energy.sc.gov](http://www.energy.sc.gov) and at Santee Cooper's website ([www.santeecooper.com](http://www.santeecooper.com).)

